Visual Profiler in the GXP® Ecosystem

A revolutionary no-code AI/ML solution for the detection, interpretation, and classification of objects of interest

Imagery courtesy of MetaVI

With increasing volumes of imagery captured through a variety of sensors, it remains extremely difficult to manage rapid identification and interpretation of objects of interest. Addressing this challenge, Visual Profiler technology delivers automated detection and distinct counts of items from both aerial and satellite imagery.

Automatic detection and classification of objects of interest

Developed by MetaVI and integrated with the GXP® Ecosystem, Visual Profiler utilizes a cognitive vision and profiling methodology (using machine learning algorithms and state-of-the-art deep learning schemes) to provide unlimited object definition and profiling flexibility. From distinct infrastructure components (structures, antennae, powerlines, etc.) and specific vehicle types, to vessels and wildlife, this breakthrough technology enables identification of a wide variety of objects of interest.

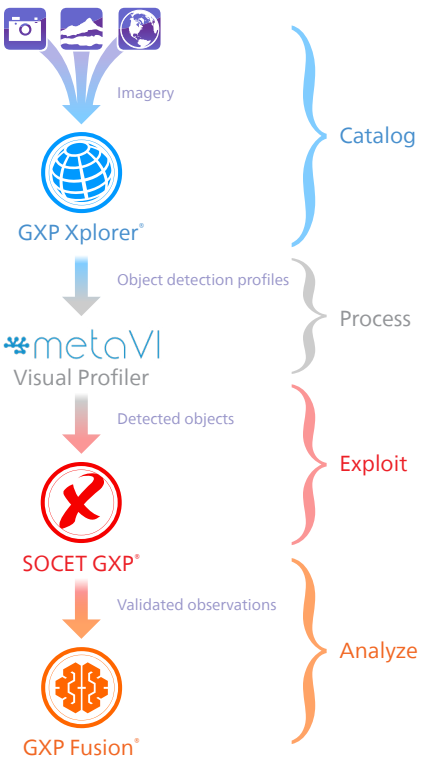
Sensor, resolution, and image variables agnostic

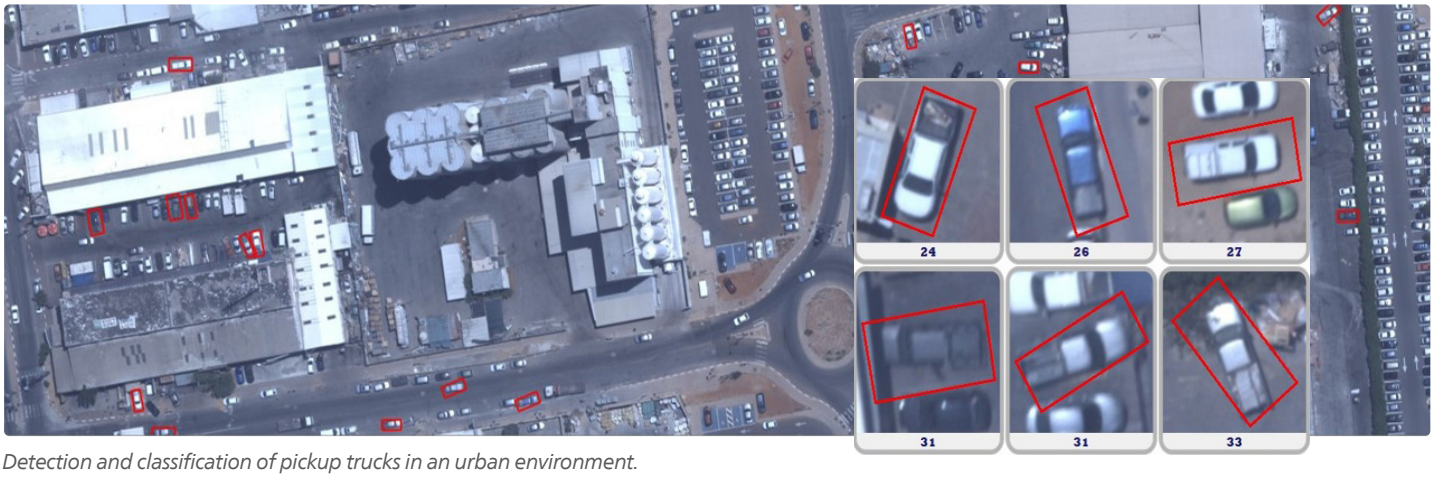
Resilient to variations in lighting, look angle, occlusions, and seasonal differences, Visual Profiler is adjustable to virtually any sensor and resolution. In addition, it produces high detection rates by leveraging an intuitive human-on-the-loop feedback mechanism to continuously increase detection precision.

No-code training, speed to exploitation for critical operation timelines

A novel AI approach enabling analysts a new level of insight by simplifying the accessibility of state-of-the-art no-code complete visual AI tools. The application provides orders of magnitude time savings over manual image interpretation methods and, as an analyst-oriented application, does not require the involvement of data scientists and/or engineers.

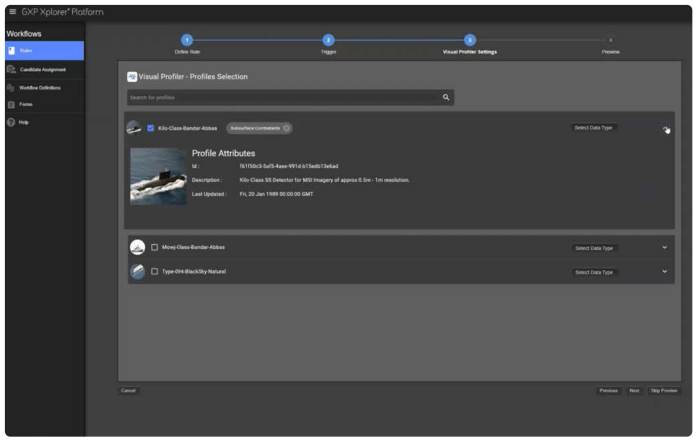
The GXP Xplorer® software solution automatically runs Visual Profiler on new images to detect objects of interest. These detections are then fed from GXP Xplorer into SOCET GXP® structured observation workflows for validation and product creation. Once validated, these observations flow into GXP Fusion® software for advanced temporal, relationship, and predictive analysis.



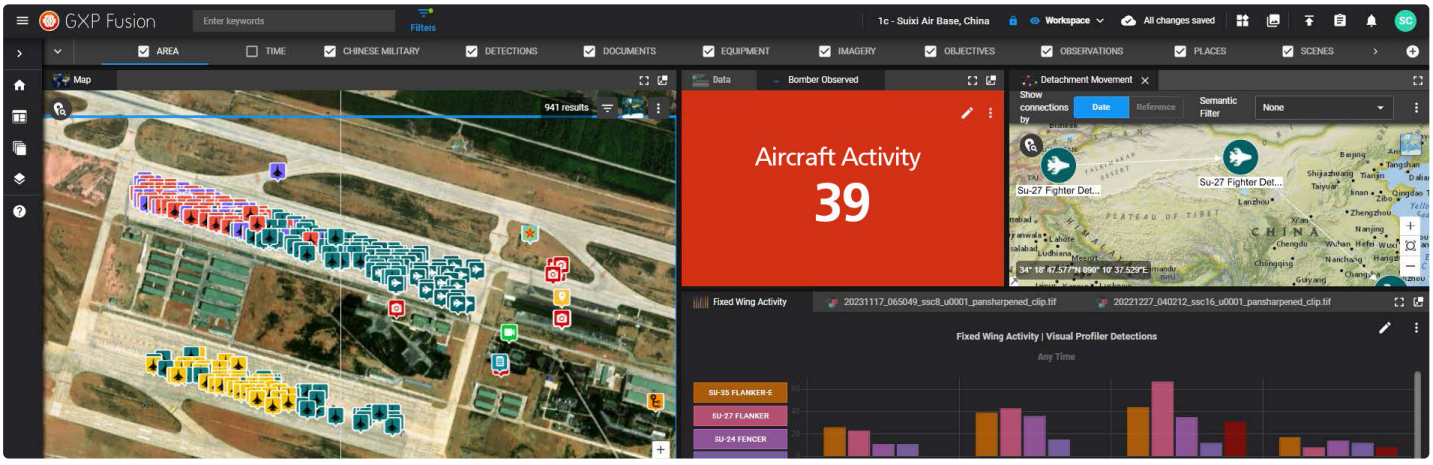


Detection and classification of pickup trucks in an urban environment.

Identification and count of all vehicles in a suburban region.



Integrated in GXP Workflows for streamlined analysis exploitation.



Visual Profiler detections are ingested into the GXP Xplorer Platform database for exploitation, dissemination, and intelligence with multi-int data fusion.

All imagery provided by MetaVI.

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